Patent Claims

1. Peptide derivatives of the formula I

$$cyclo(Arg\text{-}X^1\text{-}Asp\text{-}X^2\text{-}X^3\text{-}X^4\text{-}X^5\text{-}X^6\text{-}R^1) \quad I$$

in which
X^1 is Ser, Gly or Thr,
X^2 is Leu, Ile, Nle, Val or Phe,
X^3 is Asp, Glu, Lys or Phe,
X^4 is Gly, Ala or Ser,
X^5 is Leu, Ile, Nle, Val or Phe,
X^6 is Arg, Har or Lys,
R^1 is absent or is one or more ω-aminocarboxylic acid residue(s), the ω-aminocarboxylic acid residue(s) having a length of 500 to 2500 pm,

where the amino acids mentioned can also be derivatized,
the D and the L forms of the optically active amino acid residues are included,
and their physiologically acceptable salts and solvates.

2. Peptide derivatives according to Claim 1, of the formula I

$$cyclo(Arg\text{-}X^1\text{-}Asp\text{-}X^2\text{-}X^3\text{-}X^4\text{-}X^5\text{-}X^6\text{-}R^1) \quad I$$

in which

X^1 is Ser, Gly or Thr,
X^2 is Leu, Ile, Nle, Val or Phe,
X^3 is Asp, Glu, Lys or Phe,
X^4 is Gly, Ala or Ser,
X^5 is Leu, Ile, Nle, Val or Phe,
X^6 is Arg, Har or Lys,

R^1 is absent or is 1-10 amino acids selected from the group consisting of Ala, Asn, Asp, Arg, Cys, Gln, Glu, Hcy, His, Hse, Ile, Leu, Lys, Met, Pen, Phe, Pro, Ser, Thr, Trp, Tyr, Val and
$H_2N-(CH_2CH_2O)_m-(CH_2)_m-COOH$,

m,n in each case independently of one another are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12, with the proviso that m + n is > 0,

where the amino acids mentioned can also be derivatized,
the D and the L forms of the optically active amino acid residues are included,
and their physiologically acceptable salts and solvates.

3. Peptide compounds according to Claim 1 or 2 selected from the group consisting of

cyclo(Arg-Gly-Asp-Leu-Asp-Ala-Leu-Arg-Gly-Gly-Gly),
cyclo(Arg-Gly-Asp-Leu-Asp-Gly-Leu-Arg-Gly-Gly-Gly),
cyclo(Arg-Gly-Asp-Leu-D-Ala-Ala-Leu-Arg-Gly-Gly-Gly),
cyclo(Arg-Thr-Asp-Leu-D-Asp-Ala-Leu-Arg-Gly-Gly-Gly),
cyclo(Arg-Gly-Asp-Leu-D-Asp-Ala-Leu-Arg-Abu-Abu),
cyclo(Arg-Gly-Asp-Leu-D-Asp-Ala-Leu-Arg-Aha-Aha),
cyclo(Arg-Gly-Asp-Leu-D-Asp-Ala-Leu-Arg-Aha),
cyclo(Arg-Gly-Asp-Leu-D-Asp-Ala-Leu-Arg-Aee),
cyclo(Arg-Thr-Asp-Leu-D-Asp-Ala-Leu-Arg-Abu-Abu),
cyclo(Arg-Thr-Asp-Leu-D-Asp-Ala-Leu-Arg-β-Ala),
cyclo(Arg-Gly-Asp-Leu-D-Asp-Ala-Leu-Arg-β-Ala),
and their physiologically acceptable salts and solvates.

4. Peptide compounds of the formula I according to Claims 1 and 2 and the compounds according to Claim 3, and their physiologically acceptable salts and solvates as medicaments.

5. Medicament according to Claim 4 as an inhibitor for the control of disorders which are based on an expression and pathological function of $\alpha_v\beta_6$ integrin receptors.

6. Medicament according to Claim 5 for the control of thromboses, cardiac infarct, coronary heart disorders, arteriosclerosis, tumours, osteoporosis, fibroses, inflammation, infections, psoriasis and for influencing wound-healing processes.

7. Pharmaceutical preparation, comprising at least one medicament according to one of Claims 5 and 6 and, if appropriate, vehicles and/or excipients and, if appropriate, other active compounds.

8. Use of peptide compounds according to Claims 1 to 3 and/or their physiologically acceptable salts for producing a medicament for the control of disorders which are based on expression and pathological function of $\alpha_v\beta_6$ integrin receptors.

9. Use according to Claim 8 for producing a medicament for the control of thromboses, cardiac infarct, coronary heart disorders, arteriosclerosis, tumours, osteoporosis, fibroses, inflammation, infections, psoriasis and for influencing wound-healing processes.